

STIGMA OF MENTAL ILLNESS AND SUBSTANCE USE DISORDERS: DOES
RELIGIOUS FUNDAMENTALISM PLAY A ROLE?

A Thesis
by
EMILY A. ROWE

Submitted to the Graduate School
at Appalachian State University
in partial fulfillment of the requirements for the degree of
MASTER OF ARTS IN CLINICAL PSYCHOLOGY

December 2019
Department of Psychology

STIGMA OF MENTAL ILLNESS AND SUBSTANCE USE DISORDERS: DOES
RELIGIOUS FUNDAMENTALISM PLAY A ROLE?

A Thesis
by
EMILY A. ROWE
December 2019

APPROVED BY:

Jacqueline R. Hersh, Ph.D.
Chairperson, Thesis Committee

Lisa A. Curtin, Ph.D.
Chairperson, Thesis Committee

Andrew Monroe, Ph.D.
Member, Thesis Committee

Rose Mary Webb, Ph.D.
Chairperson, Department of Psychology

Mike McKenzie, Ph.D.
Dean, Cratis D. Williams School of Graduate Studies

Copyright by Emily A. Rowe 2019
All Rights Reserved

Abstract

STIGMA OF MENTAL ILLNESS AND SUBSTANCE USE DISORDERS: DOES RELIGIOUS FUNDAMENTALISM PLAY A ROLE?

Emily Rowe
B.A., University of North Carolina Wilmington
M.A., Appalachian State University

Chairpersons: Jacqueline Hersh, Ph.D. and Lisa Curtin, Ph.D.

Stigmatization of severe mental illness and substance use disorders is widespread, associated with poorer health outcomes, and often attributed to a moral failure or character flaw. At the same time, religious fundamentalism—defined as strict adherence to religious dogma—is an increasingly relevant ideology in the United States. This ideology is associated with a tendency to stigmatize individuals who do not adhere to established values and may therefore have negative implications for perceptions of mental illness. For the present study, participants from Amazon’s Mechanical Turk ($N = 380$) identified as evangelical or not and were randomly assigned to view one of three illness vignettes: schizophrenia, alcohol use disorder, and asthma (control). After viewing the assigned vignette, each participant responded to the Stigmatizing Attitudes Toward Mental Illness scale for the character presented in the vignette. Participants who identified as evangelical reported significantly higher stigmatization of schizophrenia compared to non-evangelicals, but did not differ on stigma in relation to alcohol use disorder. The finding that evangelicals stigmatized schizophrenia more than non-evangelicals might be explained by more societal rule violation

among those with schizophrenia and perceived sacrilege via religious delusional content, and the finding that the two groups did not differ in stigmatization of alcohol use disorder might be explained by higher base rates of alcohol use disorder, higher levels of substance use stigma among a general population, and religious-based treatment and legislation regarding substance use disorders. Although limited by the use of vignettes and a self-report measures of stigma, these findings underscore the need to address religious belief adherence in stigma research, as well as the need to develop tailored anti-stigma interventions for those in fundamentalist religious groups.

Acknowledgments

First, I would like to express my gratitude for my mentors Dr. Jacqueline Hersh and Dr. Lisa Curtin for their guidance throughout the research process. Without their mentorship, this project would not have been completed. I would also like to thank the support and consultation I have received from my committee member, Dr. Andrew Monroe. Along with my mentors, the Curtin-Hersh REACT lab, comprised of undergraduate and graduate students, was essential in the research process.

I would like to offer my appreciation for the research grant funding I received from Appalachian State University's Office of Student Research. The research grant allowed me to conduct meaningful research as a graduate student, and I appreciate their willingness to invest in the current study.

Finally, I would like to thank my parents, Steve and Lisa Rowe, and my brother, Allen Rowe, for their support and encouragement throughout the research process. My family's unfailing belief in my potential has helped me develop both as a researcher and a clinician throughout my graduate study at Appalachian State University.

TABLE OF CONTENTS

Abstract.....	iv
Acknowledgments.....	vi
List of Tables.....	viii
List of Figures.....	ix
Introduction.....	1
Methods.....	12
Results.....	16
Discussion.....	19
References.....	30
Appendix A: Stigmatizing Attitudes Toward Severe Mental Illness Scale.....	42
Appendix B: Religious Fundamentalism Scale.....	43
Appendix C: Demographic Questionnaire.....	45
Appendix D: Schizophrenia Vignette.....	47
Appendix E: Alcohol Use Disorder Vignette.....	48
Appendix F: Asthma Vignette.....	49
Appendix G: IRB Exemption Notice.....	50
Vita.....	51

List of Tables

Table 1. Descriptive Statistics.....	39
Table 2. ANOVA Results.....	40

List of Figures

Figure 1. Interaction between evangelicalism and vignette condition on stigmatization.....41

Stigma of Mental Illness and Substance Use Disorders: Does Religious Fundamentalism Play
a Role?

Emily A. Rowe

Appalachian State University

Abstract

Stigmatization of severe mental illness and substance use disorders is widespread, associated with poorer health outcomes, and often attributed to a moral failure or character flaw. At the same time, religious fundamentalism—defined as strict adherence to religious dogma—is an increasingly relevant ideology in the United States. This ideology is associated with a tendency to stigmatize individuals who do not adhere to established values and may therefore have negative implications for perceptions of mental illness. For the present study, participants from Amazon’s Mechanical Turk ($N = 380$) identified as evangelical or not and were randomly assigned to view one of three illness vignettes: schizophrenia, alcohol use disorder, and asthma (control). After viewing the assigned vignette, each participant responded to the Stigmatizing Attitudes Toward Mental Illness scale for the character presented in the vignette. Participants who identified as evangelical reported significantly higher stigmatization of schizophrenia compared to non-evangelicals, but did not differ on stigma in relation to alcohol use disorder. The finding that evangelicals stigmatized schizophrenia more than non-evangelicals might be explained by more societal rule violation among those with schizophrenia and perceived sacrilege via religious delusional content, and the finding that the two groups did not differ in stigmatization of alcohol use disorder might be explained by higher base rates of alcohol use disorder, higher levels of substance use stigma among a general population, and religious-based treatment and legislation regarding substance use disorders. Although limited by the use of vignettes and a self-report measures of stigma, these findings underscore the need to address religious belief adherence in stigma research, as well as the need to develop tailored anti-stigma interventions for those in fundamentalist religious groups.

Stigma of Mental Illness and Substance Use Disorders: Does Religious Fundamentalism Play a Role?

The U.S. Surgeon General identified stigma as a substantial impediment to the treatment of mental illness (United States Department of Health and Human Services, 1999). Similarly, existing research identifies stigma as a barrier to seeking and receiving adequate healthcare for individuals with mental illness (Abbey et al., 2012). In some cases, stigma is defined as “disqualification from social acceptance, derogation, marginalization, and ostracism” (State of Wisconsin, 2005, 51.03e). Stigma can negatively affect a person with mental illness at the institutional level—through governmental legislation, funding, and availability of mental health resources; at the community level—through the beliefs and behaviors of the general public; and at the individual level—through being a victim of hostile discriminatory behavior or discriminatory avoidance (Corrigan, Markowitz, & Watson, 2004). At each of these levels, the stigmatization of mental illness contributes to negative experiences and poor outcomes for those with mental illness (Coutre & Penn, 2003).

Beyond experienced or perceived stigma, individuals with mental illness often report self-stigma, or the internalization of broader negative assumptions regarding mental illness (Vogel & Wester, 2003). Wahl’s (1999) survey of National Alliance on Mental Illness members revealed that stigma against people with mental illness is so pervasive that people with mental illness expect to be treated poorly by the general public, experience and anticipate rejection based on their illness, and experience demoralization and lowered self-esteem. Individuals with mental illness commonly report experiencing stigmatization through negative comments or offensive depictions of their illness. For instance, 80% of respondents reported personal stigmatization “often” or “very often,” and half of respondents indicated

witnessing hurtful media portrayals “often” or “very often.” More than half of the respondents reported being shunned or avoided because of their mental health status; one in three reported being denied for a job after disclosing their mental health status, and three out of ten reported being denied health insurance due to “pre-existing conditions.” Overall, the experience of stigma against mental illness relates to people with mental illness having fewer positive social interactions, receiving fewer job opportunities, and facing discrimination when seeking a place to live (Lawrie, 1999). It is therefore vital to understand how individuals’ belief systems affect their perceptions of other people and potentially influence the stigmatization of mental illness.

Stigmatization of Mental Illness

The stigmatization of mental illness, especially severe and persistent mental illnesses such as schizophrenia and bipolar disorder, is common among the general population. In a general population survey, 70% of respondents considered people with schizophrenia to be dangerous, and 80% of respondents considered people with schizophrenia to be unpredictable and unable to communicate appropriately (Crisp, Gelder, Rix, Meltzer, & Rowlands, 2000). Although the belief that people with schizophrenia are dangerous is common, the literature estimates that only 1-2% of people with schizophrenia engage in criminal activity (Mullen, 1992). The stigmatization of mental illness is posited to stem from a common set of stereotypes (Brockington, Hall, & Levings, 1993). The first stereotype is known as “fear and exclusion” (or social restrictiveness), which is the belief that people who are mentally ill should be feared, and therefore isolated to protect the general public. The second stereotype is “benevolence,” which is the belief that people with mental illness are naïve and childlike in their dependence on others for protection and providence. Although this latter stereotype may

appear innocuous, people with mental illness report that the stereotype of benevolence contributes to further social distance (Corrigan, Edwards, Green, Diwan, & Penn, 2001). The third stereotype that contributes to the stigmatization of mental illness is “authoritarianism,” or the belief that people with severe mental illness are irresponsible, violate important social norms, and must be controlled by those without mental illness.

Existing research indicates that, in particular, substance use disorders (SUDs) are more highly stigmatized than other behavioral health diagnoses (Room, 2005). Stigma surrounding those with SUDs operates at both the social and structural level. Social stigma refers to the concept of large groups endorsing and perpetuating stereotypes about a particular group and acting against the group, while structural stigma refers to the institutional policies, laws, and procedures that operate against the stigmatized group (Corrigan, Kerr, & Knudsen, 2005). Within the legal and healthcare institutions, SUDs tend to be viewed as issues of criminality or moral failure rather than a physical or mental health concern (Radcliffe & Stevens, 2008). Research indicates that healthcare providers discriminate against patients with SUDs and provide lesser quality care to those with SUDs compared to those with other disorders, as providers tend to perceive SUDs as self-inflicted and tend to perceive those with SUDs as having serious character flaws (McLaughlin & Long, 1996). The effects of stigma against those with SUDs likely contribute to treatment delay and avoidance, along with lower levels of adherence to treatment interventions, as research indicates that stigma operates as a barrier to seeking and completing treatment (Radcliffe & Stevens, 2008). When individuals with SUDs seek treatment, attrition rates are much higher than those of individuals seeking treatment for other mental illnesses (Ahern, Stuber, & Galea, 2007). The alienation and discrimination stemming from stigma of SUDs

have been found to be associated with poorer physical and mental health outcomes (Ahern et al., 2007). Beyond the healthcare institution, the stigmatization experienced by those with SUDs has been found to be associated with social alienation, which adversely affects the individual's employment, housing, and social opportunities (Room, 2005).

Most literature regarding stigmatization of mental illness is correlational, but some researchers have utilized vignette-based experimental designs to investigate stigmatization. Jahnke (2018) conducted research assessing the stigmatization of pedophilia versus normative sexual functioning using a vignette design. In this study, participants were randomly assigned to read one of three vignettes and subsequently rate their emotional response and stigmatization of the person described. Sowislo et al. (2017) used a similar vignette-based methodology to assess stigmatization of psychiatric symptoms. This study also randomly assigned vignettes to participants, with each of the vignettes portraying a different psychiatric diagnosis but refraining from stating the diagnosis. Further, each vignette was systematically varied with regard to where the hypothetical person sought psychiatric services (i.e., a general hospital, a psychiatric hospital with a forensic unit, or a psychiatric hospital without a forensic unit). After reading one of the vignettes, participants were asked to indicate their desired level of social distance from the person described in the vignette, who displayed symptoms of an acute psychotic disorder, alcohol dependency, or borderline personality disorder. Results indicated that participants desired more social distance from an individual with an alcohol use disorder than from an individual with an acute psychotic disorder or borderline personality disorder.

Religious Fundamentalism

Individuals' belief systems contribute to their perceptions of other groups, with some beliefs potentially making people more prone to hold stigmatizing attitudes toward mental illness. An increasingly prevalent ideological system in the United States, religious fundamentalism, may be associated with these stigmatizing attitudes. Fundamental religiosity can be broadly defined as the adherence to a set of religious teachings that are believed to be the infallible truth about existence on Earth and in the afterlife (Altemeyer & Hunsberger, 1992). Fundamentalism in the U.S. has experienced a resurgence in recent decades, with churches based on fundamentalist belief systems adding more members than any other denomination in the last half of the twentieth century, and one study indicating that 30% of Americans identify as fundamentalist (Hood, Hill, & Williamson, 2005). The Pew Research Center found "evangelical Protestant" to be the most commonly identified religious group in America (2015). Within recent years, fundamentalist Christian religiosity has increasingly influenced the American political sphere, with growing electoral support from devout, fundamentalist Christians for conservative politicians (Malka, Lelkes, Srivastava, Cohen, & Miller, 2012). Research suggests that politically divisive issues, such as same-sex marriage, abortion, and immigration, tend to fall along religious ideological lines (Koleva, Graham, Iver, Ditto, & Haidt, 2012). The increasing impact of fundamental religious belief systems on American political institutions inherently influences legislation involving healthcare policies and legal statutes, which in turn can be expected to shape citizens' perspectives, attitudes, and behaviors through social, structural, and individual stigmatization of perceived out-groups (Malka et al., 2012).

One of the earliest and most comprehensive conceptualizations of religious fundamentalism was developed by Altemeyer and Hunsberger (1992). Their overarching definition posits four main points. First, there is a belief in one set of religious teachings that are the absolute and unarguable truth about humanity and God. Second, this absolute truth is staunchly opposed by the forces of evil, such as the devil or worldly desires, and these forces of evil should be vigorously fought by believers. Third, this religious truth must be followed according to the unchanged dogma of the past. Finally, fundamentalist thought emphasizes that those who believe and follow the truth hold a special relationship with God and will receive salvation, whereas those who do not follow these teachings will experience damnation. This four-faceted definition theorized fundamentalism as being a resolute attitude toward one's own beliefs rather than one specific set of beliefs (Altemeyer, 2003). Fundamental religiosity, overall, presents a "countertext" to modern life; that is, those who adhere to fundamentalist belief systems often wish to directly oppose what they believe to be the secular and ungodly world around them (Lawrence, 1989).

Previous literature has shown strong and consistent correlations between fundamentalism and right-wing authoritarianism, which is broadly defined as the covariation of submissive attitudes toward authority, aggressiveness toward those who do not align with authority, and strict adherence to social conventions (Mavor, Louis, & Laythe, 2011; Altemeyer, 1981). Further, rigid cognitive structure has been found to be associated with both right-wing authoritarianism and religious fundamentalism, which contributes to a salient out-group bias, or "us versus them" mentality (Jackson & Hunsberger, 1999). Individuals high in right-wing authoritarianism and religious fundamentalism report that their religion teaches them to submit to authority, reject "outsiders" and "sinners," and impose strict rules

about proper and acceptable behavior (Altemeyer, 1981). Additionally, Altemeyer (1981) suggests that in the case of individuals who adhere to both religious fundamentalism and right-wing authoritarianism, the two belief systems interact and sustain one another.

Fundamentalism's authoritarian tendency to reject out-groups is evidenced by the literature regarding fundamentalism's association with prejudice. Hill, Cohen, Terrell, and Nagoshi (2010) found that need for predictability and maintenance of one's worldview mediated the association between fundamentalist belief adherence and prejudices against women, lesbian, gay, bisexual, and transgender individuals, and non-White individuals. This finding is consistent with earlier research indicating that those who more strongly adhere to fundamentalist belief systems tend to reject gay and lesbian individuals and single mothers and blame these groups for perceived widespread unemployment. Moreover, this association was mediated by the belief that gay and lesbian individuals and single mothers threaten the values of those with fundamentalist beliefs (Jackson & Esses, 1997). Further, in other research, fundamentalism predicted the rejection of gay men and lesbian women, who fall within a perceived out-group and violate established fundamentalist values (Brandt & Reyna, 2010). A meta-analytic overview of the "religious racism" literature indicates that religion is associated with racism when the facets of the participants' religion include higher levels of fundamentalism (Hall, Matz, & Wood, 2010).

When examining how fundamentalism might affect perceptions of mental illness, it is important to consider the relationship between fundamentalism and rejection of science (Altemeyer, 1981). Crosby and Bossley (2012) found that individuals high in fundamentalism anticipate and resent potential threats to their faith and values, and a scientific approach to addressing mental illness may pose a significant threat to the concept

that adherence to perceived religious truth can resolve mental illness within the religious community. The authors used an online survey consisting of self-report measures and found that the level of self-disclosure required when seeking help may lead someone high in fundamentalism to expect rejection or violation of their religious values. Respondents higher in religiosity expected worse outcomes from self-disclosing to a secular professional, as they tend to conceptualize emotional or behavioral distress as spiritual, rather than psychological, in nature (Crosby & Bossley, 2012). Further, McLatchie and Draguns (1984) found that members of conservative evangelical churches tend to view people with mental illness as lacking faith and moral strength, which may further categorize those with mental illness or SUDs as deviant and immoral.

In summary, the existing research regarding religious fundamentalism suggests there are associations between fundamentalist belief adherence and authoritarianism and prejudice against perceived out-groups such as women, LGBT individuals, and non-White individuals (e.g., Hall et al., 2010; Jackson & Esses, 1997). While the relationship between fundamental belief adherence and stigmatization toward perceived out-groups has been explored, literature regarding the relationship between fundamentalist belief adherence and stigmatization of those with *mental illness* has yet to be explored explicitly. Past research suggests that people in the general population tend to stigmatize individuals with mental illness and SUDs (Crisp et al., 2000). Since individuals high in religious fundamentalism report higher levels of prejudice toward out-groups that violate norms, stigma toward those with mental illness and SUDs may be more pronounced among individuals who identify with fundamentalist religious organizations. This increased stigma may be particularly detrimental

for individuals who identify with fundamentalist beliefs but also experience mental health concerns and SUDs. However, this has not yet been researched.

In much of this literature, fundamentalism is quantified using continuous measurement of beliefs, but does not account for denominational membership or participants' self-identification as "fundamental" or "evangelical." Further, fundamentalism literature tends to utilize self-report measures and correlational study designs. Participants tend to be primarily White and close to traditional college age (around 18 to 24), as many participants are recruited from undergraduate psychology classes. Thus, there is a lack of knowledge regarding individuals who adhere to fundamentalist belief systems who are not in higher education. Given the tensions between fundamentalism and secular education, and the subsequent underrepresentation of individuals high in fundamentalism on college campuses, a need exists to explore fundamentalist thought in a way that accesses individuals uninvolved in the secular education system (Darnell & Sherkat, 1997). Finally, although vignette-based research design is common in the field of stigma research, no existing study examines the relationship of fundamental religiosity with mental illness stigmatization utilizing a vignette-based design. Given the rigid core facets of fundamentalism and the research evidencing tendencies for those high in fundamentalism to develop and discriminate against "out-groups" and associate with right-wing authoritarianism, I hypothesize that individuals from a general population sample who identify as evangelical will report more stigmatized views of mental illness and SUDs depicted in a vignette than those who do not identify as evangelical, when compared to a medical illness.

Methods

Participants

I recruited 489 participants recruited from Amazon's Mechanical Turk (MTurk). Participation eligibility was restricted to English speakers, as the measures being used were normed and standardized in English-speaking populations only. Eligibility was also restricted to participants living in the United States, as the current study focuses on American fundamentalist belief systems. Each participant was compensated through the MTurk website for completing the measures.

Of the recruited 489 participants, 109 were omitted from analysis because they failed the validity checks. After omitting those who failed the checks, analyses were conducted on a sample of 380 total participants. The participants were 54.8% female, with a mean age of 36.52 ($SD = 12.08$). The sample was 82.1% White or Caucasian, 6.9% Hispanic or Latino, 6.4% Asian American, and 3.5% Native American. Due to technical difficulties with the survey software that yielded missing values for respondents who selected "male" as their gender or "African American/Black" as their race or ethnicity, the exact percentage of these variables are unknown. It cannot be definitively determined whether the missing values reflect these responses or participants choosing not to respond. Regarding highest level of education completed, 0.3% reported having some high school education with no diploma, 8.5% high school graduate or GED, 18.4% some college credit with no diploma, 3.7% trade/technical/vocational training, 12.5% associate's degree, 41.8 bachelor's degree, 13% master's degree, 0.5% professional degree, and 1.3% doctoral degree. Regarding religious views, 36.6% of participants identified as evangelical.

Materials

Stigmatizing Attitudes Toward Mental Illness scale. Stigma against people described in the vignettes was measured using a portion of the Stigmatizing Attitudes Toward Mental Illness scale (Reavley & Jorm, 2011; see Appendix A). Along with the seven items from the original scale, the current study included three additional items from Brockington, Hall, and Levings (1993) to reflect commonly endorsed mental illness stereotypes (fear and exclusion, benevolence, and authoritarianism). For each of the 10 items, participants read a statement and rated their endorsement of the statement on a 6-point Likert scale, ranging from *strongly disagree* (1) to *strongly agree* (6). Items include, “A problem like [this] is a sign of personal weakness,” and “People with a problem like this are dangerous.” Responses were averaged, and total scores ranged from 1 to 6. Higher scores suggest more endorsement of stigmatizing attitudes, while lower scores suggest less endorsement of stigmatizing attitudes. No information regarding validity or reliability could be located for this scale; however, the scale is face valid and has been used in various vignette-based studies regarding the stigmatization of mental illness with no comparable psychometrically-superior scale available. Internal consistency for the scale was good in the present study ($\alpha = .88$).

Religious Fundamentalism Scale. Religious fundamentalism (RF) was measured using the Revised 12-Item Religious Fundamentalism Scale (Altemeyer & Hunsberger, 2004; see Appendix B). For each item, the participant read a statement and responded using a nine-point rating scale, ranging from *very strongly disagree* (1) to *very strongly agree* (9). Items include, “God has given humanity a complete, unfailing guide to happiness and salvation, which must be totally followed,” and six reverse-coded items such as, “Whenever science

and sacred scripture conflict, *science* is probably right.” Cronbach’s alphas for the scale range from .93 to .95 in the original studies developing the scale (Altemeyer & Hunsberger, 2004). Similarly, internal consistency was high in the present study ($\alpha = .81$). Responses to items were summed to obtain a total score. Total scores range between 12 and 108. High scores on this scale suggest stronger adherence to fundamentalist belief systems, while lower scores suggest less adherence to fundamentalist belief systems.

Demographics Questionnaire. Participants completed a demographic questionnaire (Appendix C), which asked participants to report their age, gender, race/ethnicity, marital status, education level, and whether or not they have children. Participants also reported their zip code and identified whether they were raised in a rural, suburban, or urban area. To examine religious beliefs, participants were asked to identify their religion, the denomination of their religion, and indicate whether or not they identify as evangelical. Within the demographics questionnaire, participants also indicated whether they personally have a diagnosis of mental illness and whether they have friends or family who have diagnoses of mental illness, and if so, participants rated how often they interact with the person and evaluated the quality of contact with the person. Finally, participants were asked to guess the gender and age of the character described in the vignette.

Validity Check Items. To ensure participants were attentive to the material and questions, validity check items were interspersed throughout the scales. For the first validity check, in the Stigmatizing Attitudes Toward Severe Mental Illness measure, participants were prompted to select “strongly disagree” for an item. Within the demographic questionnaire, the second validity check prompted participants to select “white elephant” out of a set of other color-animal combinations. The third validity check was located at the end

of the demographic questionnaire and operated as a cultural check to identify which participants were misrepresenting their location in an effort to obtain payment on Amazon's Turk. This cultural check prompted participants to name the vegetable in the photo presented, which is commonly referred to in American dialect as an "eggplant." Failing to identify the vegetable pictured as an eggplant suggested fraudulent responding and respondents who failed this check could not be determined to be of the target population. This method was presented by researchers in response to identification of widespread fraudulent responding on Amazon's Turk despite the site's IP-based screening procedures (Dennis, Goodson, & Pearson, 2018).

Vignettes. Study materials also included three written vignettes that were varied between participants using random assignment. Vignettes presented a hypothetical character and depicted the symptoms of severe mental illness, SUD, or medical disorder. To present severe mental illness, participants read an adapted vignette about chronic schizophrenia from the University of Melbourne's National Survey of Mental Health Literacy and Stigma (see Appendix D; Reavley & Jorm, 2011). To present a SUD, participants read an adapted vignette about alcohol use disorder (AUD; see Appendix E; Angermeyer & Matschinger, 1997). To present medical illness, participants read an adapted vignette about asthma (see Appendix F; Pescosolido, Fettes, Martin, Monahan, & McLeod, 2007). All vignettes were modified to remove indication of age or gender, and were altered to maintain consistency across vignettes to minimize confounds. For example, each of the vignettes began by stating that the fictional character "lives in an apartment in your neighborhood." Further, one sentence was removed from both the severe mental illness and SUD vignettes to make them a similar length to the medical illness vignette. A sentence regarding work-related and social

difficulties from the AUD vignette was also added to the schizophrenia and asthma vignette to prevent unequal moral judgment of the protagonist depicted in the AUD vignette.

Procedure

Participants volunteered for the online study via MTurk in exchange for small monetary compensation. Participants volunteered via one of two mutually exclusive survey links; one entitled “Perceptions of Illness” and the other entitled “(Evangelicals Only) Perceptions of Illness.” I published two separate links with one recruiting evangelical individuals in an effort to oversample the evangelical population. Participants were randomly assigned to view one of three vignettes (i.e., schizophrenia, AUD, asthma) for at least 30 seconds before they were allowed to access the next page. After reading the assigned vignette, participants were prompted to complete the Stigmatizing Attitudes Toward Mental Illness scale regarding the individual from the vignette (Reavley & Jorm, 2011). Then, participants completed the Revised RF Scale and a brief demographic questionnaire. To conclude, participants were thanked and compensation was confirmed. All procedures were approved by the university’s Institutional Review Board (IRB; see appendix G).

Results

G*power, a statistical analysis software, was utilized to calculate sample size for the study; 360-390 participants (approximately 60 participants in each cell) was estimated as sufficient. All analyses were conducted using IBM SPSS Statistics software, Version 25.

Validity Checks

As noted earlier, participants who failed any of the three validity check items were removed from analysis; 40 participants failed the first validity check item, 6 failed the second validity check item, and 63 failed the third validity check item. Answering in a way that

indicates lack of attention, or non-serious answering, is known to be a prominent threat to the validity of online-based research (Aust, Diedenhofen, Ullrich, & Musch, 2013); therefore, I chose to exclude responses from participants who exhibited non-serious responding via failure to attend to the survey's prompts. Additionally, participants who did not respond to at least 75% of the items on the RF scale ($n = 1$) and Stigmatizing Attitudes Toward Severe Mental Illness scale ($n = 1$) were removed from the analysis. In order to account for missing data for participants who responded to at least 75% of the items on these scales, I utilized a mean substitution process; this process consisted of obtaining a mean score from the participant's completed items and replacing missing items with their calculated mean score. For the Stigmatizing Attitudes Toward Severe Mental Illness scale, I utilized mean substitution for 17 participants and for the RF scale, I utilized mean substitution for 18 participants.

I then examined the data to determine if assumptions for an analysis of variance (ANOVA) were met. To assess normality, I performed the Shapiro-Wilk test, which suggested that the population was normally distributed and therefore appropriate for analysis ($p = .434$). To assess homogeneity of variances, I performed Levene's test, which suggested that sample sizes for each group being compared could not be assumed to be equal in number ($p < .001$). Because the assumption of homogeneity was not met, I performed an additional non-parametric test (Kruskal-Wallis). Of note, the kurtosis in the asthma condition for those who identified as evangelical was above 1 (kurtosis = -1.36). Further exploration via a histogram indicated a potentially binomial distribution in this condition. After testing assumptions and obtaining the Levene's test result, I reviewed the data graphically via boxplots to determine outliers, and five outliers identified were excluded from analyses.

Examining z-scores showed no additional potential outliers (i.e., no values greater than ± 3 SD).

Finally, to ascertain the validity of self-identified evangelicalism, those who identified as evangelical were compared to those who did not identify as evangelical on the RF scale. Indeed, self-identified evangelicals reported significantly higher scores ($M = 70.55$, $SD = 18.47$) than self-identified non-evangelicals ($M = 48.47$, $SD = 25.52$) on RF; $t(360) = 8.71$, $p < .001$, $d = 0.92$

Evangelical Identification, Vignette Condition, and Stigma

A 2 (evangelical vs. not evangelical) x 3 (vignette condition: schizophrenia, AUD, asthma) ANOVA was conducted to examine the effect of vignette condition and self-identified evangelicalism on stigmatization of schizophrenia, AUD, and asthma. The Stigmatizing Attitudes Toward Severe Mental Illness scale average score (stigma) was the dependent variable.

The interaction of assigned vignette condition and self-identified evangelicalism on stigmatizing attitudes was significant, $F(2, 357) = 5.40$, $p = .005$, $\eta^2 = 0.03$ (see Figure 1). Post hoc comparisons using the Tukey HSD test indicated that evangelical participants reported more stigma in response to the schizophrenia and asthma vignette compared to non-evangelicals; evangelical and non-evangelical groups did not differ significantly in their reported stigma of AUD. When comparing across vignette condition within the evangelical group, Tukey's HSD test indicated a statistically significant mean difference in stigmatization between the schizophrenia and asthma condition, with higher stigmatization of schizophrenia compared to AUD, and higher stigmatization of AUD when compared to asthma ($p = .010$). When comparing across vignette condition within the non-evangelical

group, Tukey's HSD test indicated a statistically significant mean difference in stigmatization between the asthma condition and AUD condition ($p < .001$) and between the asthma condition and schizophrenia condition ($p < .001$). Within the non-evangelical group, reported stigmatization of AUD was higher than stigmatization of schizophrenia, which was higher than stigmatization of asthma. In addition, there was a significant main effect for evangelicalism, $F(1, 357) = 25.370, p < .001, \eta^2 = 0.07$, with evangelicals reporting higher levels of stigmatization for all three vignette conditions when compared to non-evangelicals. See Table 1 for descriptive statistics.

Given that the assumption of homogeneity of variances was not met per the Levene's test, I also conducted a Kruskal-Wallis nonparametric test to further examine the data. The Kruskal-Wallis test also resulted in a statistically significant difference in reported stigmatization between vignette conditions ($H(2) = 31.15, p < .001$). Further, pairwise comparisons similarly indicated significant differences between asthma and AUD ($p < .001$) and between asthma and schizophrenia ($p < .001$), but did not indicate a significant difference between AUD and schizophrenia ($p = .51$).

Discussion

The current between-subjects study used vignettes to examine the relationship between evangelical belief adherence, and stigmatization of schizophrenia, AUD, and asthma (as a control condition). Overall, evangelical participants reported higher stigmatization across all three conditions than non-evangelical participants. Those who identified as evangelical reported more highly stigmatizing attitudes toward a person depicted with schizophrenia than those who were not evangelical. Contrary to the hypothesis, stigmatization of AUD did not differ between evangelical and non-evangelical participants.

Evangelical beliefs and stigma

The extant literature base suggests that schizophrenia and SUDs are highly stigmatized behavioral health diagnoses (Crisp et al., 2000; Room, 2005). While schizophrenia and asthma were more highly stigmatized among evangelical participants, AUD was the only disorder of the three presented vignettes that was similarly stigmatized by both evangelical and non-evangelical participants. Although evangelicals and non-evangelicals did not differ on stigma toward the protagonist in the AUD vignette, they were both rated in the mid-range of overall stigma, which aligns with the literature base (Room, 2005; Yang, Wong, Grivel, & Hasin, 2017). Previous literature found mid-levels of SUD stigma from the general population, healthcare providers, and racial minorities. These studies of SUD stigma present percentages of the sample population who endorse different stigmatizing beliefs, with approximately half of participants endorsing commonly-known stereotypes of SUD (Boekel, Brouwers, Weeghel, & Garretsen, 2013; Kulesza, Larimer, & Rao, 2013; Yang et al., 2017). For example, Corrigan, Kuwabara, and O'Shaughnessy (2009) conducted a vignette-based study on SUD stigma with a general population, assessing participants' responses to the vignettes with questions measuring reported fear, threat, avoidance, and responsibility. The researchers found that psychiatric disorders were more stigmatized than physical disorders, and that SUDs were the most stigmatized of all the psychiatric disorders. Additionally, a meta-analysis on stigma of SUDs assessing established stereotypes of mental illness and SUDs (dangerousness, unpredictability, agency in personal decision-making, immorality, prognosis, and attributional beliefs) found that SUDs prompted higher reported stigmatization among a general population (Yang et al., 2017). However, among the non-evangelical group within the current study, there was no overall difference

between stigmatization of AUD and schizophrenia, while the evangelical group reported higher stigmatization of schizophrenia.

The finding that evangelical individuals reported more stigma toward the protagonist in the schizophrenia vignette than non-evangelicals did (while the two groups do not differ in stigma ratings for the AUD vignette) may be contextualized by religious factors for both disorders. It is common for individuals with schizophrenia to experience delusions with religious themes, with between a fifth and two-thirds of delusions featuring religious content (Siddle, Haddock, Tarrier, & Faragher, 2002). Additionally, the literature suggests that religious delusionality is a particularly challenging treatment target, as the experience of religious delusions is associated with poor engagement with treatment and longer times experiencing untreated psychotic symptoms (Mohr et al., 2010). Beyond the low adherence to treatment and longer times left untreated, the literature suggests that individuals with schizophrenia who experience religious delusions exhibit higher levels of bizarre behavior, grandiosity, and positive symptoms overall (Iyassu et al., 2013). Among evangelical individuals, the tendency for individuals with schizophrenia to exhibit bizarre behavior, religious or not, would likely be viewed as a clear deviation from set rules of conduct, which is known to be rejected and stigmatized by those who are fundamentalist (Altemeyer, 1981). Additionally, the inclusion of grandiose religiosity and religious (sometimes “demonic”) delusional content may be perceived as a violation of what is regarded as sacred content and further reinforce the belief that mental illness is a result of lacking faith or even the presence of a demonic possession. While researchers are beginning to examine the benefits of religious connection and religious coping for those with schizophrenia (e.g., Gearing et al.,

2011), overall there is little connection between churches or religious groups and individuals experiencing or undergoing treatment for schizophrenia.

On the other hand, there are a few factors related to symptomatology and treatment that might contribute to the fact that while evangelical participants stigmatized schizophrenia more than non-evangelical participants, evangelical participants did not differ significantly from non-evangelical participants in stigmatization of AUD. In general, the research base regarding stigma of SUDs suggests that general populations tend to stigmatize SUDs more than other psychiatric diagnoses, which may explain the similar levels of stigma among both evangelical and non-evangelical groups in response to the AUD vignette (Room, 2005). The evidence that SUDs are overall more stigmatized might explain why there was not a significant difference between non-evangelical and evangelical respondents' reported levels of SUD stigma. Additionally, being exposed to and interacting with stigmatized individuals tends to decrease reported stigmatization by others (Corrigan, Morris, Michaels, Rafacz, & Rusch, 2012). Alcohol use in the United States is highly prevalent, with 86.4 percent of adults reporting lifetime alcohol consumption and 70.1 percent of adults reporting consumption of at least one alcoholic drink in the past 12 months (National Institute on Alcohol Abuse and Alcoholism [NIAAA], 2018). Regarding disordered drinking behaviors, an estimated 16 million people in the United States meet criteria for AUD, or 6.2 of the total population (NIAAA, 2019). Evangelical individuals are more likely to abstain from alcohol use (with over 70 percent of Pentecostal individuals reporting no current alcohol use); however, given the higher base rate of AUD compared to schizophrenia (0.3 to 0.7 percent lifetime prevalence), evangelical individuals are still more likely to interact with people with

AUD than people with schizophrenia (American Psychiatric Association, 2013; Warner, 2009).

Additionally, a commonly-utilized treatment method for people with AUDs is 12-step self-help groups, which has been increasing in membership steadily for the past 40 years (Alcoholics Anonymous [AA], 2014; Kasutas, Ye, Greenfield, Witbrodt, & Bond, 2008). The 12-step program is known for its incorporation of spirituality and religion, and research suggests that religiosity is associated with enhanced 12-step involvement (Carrico, Gifford, & Moos, 2007). Given this intersection of 12-step and religiosity, it may be inferred that people who attend religious groups and worship services are especially likely to be exposed to people who are in recovery from an AUD and speak openly about it. In addition, churches often serve as meeting places for 12-step groups. A tenant of the 12-step program is publicly acknowledging the addiction and surrendering to a higher power for recovery, which aligns with the evangelical value of “being born again” through accepting Jesus Christ (Connors, Tonigan, & Miller, 2001). Further, while the 12-step program is not necessarily adherent to Judeo-Christian religion, the origin of the program is Christian (AA, 2014; Donovan, Ingalsbe, Benbow, & Daley, 2013). Increasing spiritual or religious involvement is often a part of recovery for those who are involved in 12-step programs, and tenants such as surrendering to a higher power present some overlap with biblical values held by evangelical religious groups.

Beyond higher base rates and treatment modalities that incorporate religious values, AUD has been addressed by various high-profile leaders within evangelical groups, most notably former president and well-known “born-again” Christian, George W. Bush. In 2001, Bush passed the Faith-Based Initiative, which allotted federal funding for religious-based

treatment programs for SUDs, which likely served as a method to minimize institutional stigma of SUDs through legislation, as well as an appeal to the beliefs of evangelical groups (Adrian, 2010). Having the disorder publicly acknowledged as “treatable” via religion might minimize stigma of the disorder for evangelical individuals relative to other disorders such as schizophrenia. In conclusion, base rates, faith-based treatment, and legislative attention may make stigmatization of AUD among evangelicals similar to non-evangelical participants and lower than stigmatization of other mental health disorders such as schizophrenia.

Some of the findings from the current study align with previous stigma research indicating that evangelical individuals tend to report higher stigmatization of others (Hall et al., 2010; Hill et al., 2010). Previous studies of evangelicalism and stigma often utilized the Religious Fundamentalism scale, while some researchers used measures of extrinsic religious orientation, self-identification with evangelical groups, or, like the current study, self-identification as “evangelical.” Regarding stigmatization, these researchers used scales such as the Manitoba Prejudice scale, which measures general attitudes toward racial and ethnic minority groups, and other scales that measure stigmatizing attitudes toward specific groups, such as LGBT-identified individuals, women, and Black individuals (Altemeyer & Hunsberger, 1992; Brandt & Reyna, 2010; Hall et al., 2010; Hill et al., 2010; Lazar & Hammer, 2018). Much of the extant literature on stigma and religiosity examines a college student sample, while the current study’s sample is more diverse and more representative of the community. While utilizing a different methodology to measure stigmatization and measuring stigmatization of different populations, the current study builds upon the literature base revealing increased stigma and prejudice endorsed by evangelical individuals toward certain conditions. The current study suggests that evangelical individuals tend to more

highly stigmatize schizophrenia and asthma when compared to non-evangelical individuals. When examining the asthma vignette condition for those who identified as evangelical, I observed an abnormal distribution of responses that suggested bimodality; interpretation of the current study's results must include consideration of this abnormal distribution.

The current research utilized a vignette design and a stigmatizing attitudes measure adapted from a mental health literacy project by Reavley and Jorm (2011), while previous literature assessing the impact of evangelical or fundamentalist belief systems on stigmatization tended to use specific scales for each illness without the presentation of vignettes to illustrate a hypothetical case (Hall et al., 2010). Additionally, some researchers who studied the impact of fundamentalist or evangelical religious beliefs developed their own measures to assess mental illness stigmatization among evangelical participants or utilized measures of preferred social distance or level of social rejection (Pescosolido, 2013; Wesselmann & Graziano, 2010). This difference in methodology may partially explain why the current results were not fully consistent with past research (e.g., evangelicals did not evidence greater stigma toward AUD than non-evangelicals).

Implications

The finding that evangelical individuals tend to stigmatize schizophrenia more than non-evangelical individuals presents several implications for addressing stigmatization of severe mental illness in evangelical religious communities. A meta-analysis by Gearing and colleagues (2010) found that religion can act both as a risk factor and protective factor for positive symptoms in schizophrenia; therefore, public health initiatives might focus on maximizing the protective factors of religion for people with schizophrenia. Specifically, Gearing and colleagues (2010) revealed that believing in rigid, punishment-based religious

concepts such as damnation and original sin is a risk factor for religious delusions, while believing in pro-social aspects of religion such as peace, love, and forgiveness is associated with fewer religious delusions and positive symptoms of schizophrenia overall. Further, involvement in religious groups can increase a sense of community among people with schizophrenia, which is another protective factor against positive symptomatology (Corrigan et al., 2012). Initiatives that connect people with schizophrenia with religious groups that posit pro-social and non-dogmatic values might help develop support systems for commonly isolated people and decrease social distance from non-affected individuals. In general, decreased social distance between stigmatized and non-affected individuals has been found to counteract stigma (Corrigan et al., 2012).

To fight stigma within religious communities, professionals must be mindful of the tendency for providers to be non-religious and often perceived as dismissive of religion by clients who are religious (Mayers, Leavey, Vallianatou, & Barker, 2007). Additionally, especially when working with people with severe mental illness who may have religious delusions, comprehensive and contextual assessment must be conducted to understand each individual holistically, taking care to differentiate between religious delusional content and non-pathological religious beliefs (Mayers et al., 2007).

Limitations

The vignettes used to assess these illnesses were AUD and schizophrenia, which may yield disorder-specific responses that are not fully representative of all severe mental illness or SUDs. In addition, the relationship between vignettes and real-world encounters is not fully understood, although vignettes are commonly utilized to examine stigmatization of mental illness (e.g., Feeg et al., 2014; Sowislo et al., 2017; Yuan et al., 2018). Another

limitation is the possibility that specific evangelical or fundamentalist groups may differ in their level of stigmatization; differentiating between evangelical or fundamentalist groups may provide a more specific understanding of the relationship between fundamentalism and stigma of mental illness and SUD. Although religious denomination was assessed, the sample was not large enough to assess for differences. The current study utilized a between-subjects design with each participant only viewing and responding to one of three vignettes, which prevents within-subjects comparisons. The current data presents some challenges with interpretation, given that the non-evangelical asthma condition evidences a slightly elevated kurtosis, and further examination suggests a potentially bimodal distribution. Further, while recruiting participants from Amazon's Mechanical Turk offered a more diverse sample, it is possible that the online recruitment system allowed some participants to take both the survey intended for evangelicals and the survey not specifically intended for evangelicals, which might compromise the validity of the findings given the potential threat to independence of samples. Another potential limitation in the current study might be the use of self-identification as evangelical or non-evangelical as the main independent variable. However, this limitation is mitigated by the significant difference found in the current study between self-identified groups on the commonly utilized Religious Fundamentalism scale, suggesting that self-identification is valid (Altemeyer & Hunsberger, 2004). Additionally, Hackett and Lindsay (2008) examined operationalization of modern American fundamentalism and posited that self-identification as "evangelical" is an effective way of defining and identifying participants who adhere to fundamentalist religious values in America.

Future Directions

The current study may serve to increase understanding of the relationship between fundamentalism and stigma while indicating some recommendations for future research in the area. Stigma within fundamentalist or evangelical communities might be more specifically understood through examining specific churches, subgroups, or denominations. Beyond subgroups, fundamentalist stigma of mental illness and SUDs may be examined by location within the United States, by frequency of worship attendance, or by frequency and quality of contact with other religious group members. Additionally, future vignette-based research might use different examples of SUDs and severe mental illnesses to examine whether the current findings extend to other illnesses within the two general categories. Finally, qualitative research might allow for a more holistic and nuanced understanding of evangelical perspectives. In particular, future research might utilize a partnership approach to research such as community-based participatory research, which might allow researchers to attain data while counteracting the religiosity gap in academia and increasing partnership between mental health professionals and the evangelical or fundamentalist community (Campbell et al., 2006).

Conclusions

Stigmatization is a far-reaching impediment to treatment and healthcare outcomes for individuals who are diagnosed with severe mental illness and SUDs (Abbey et al., 2012; United States Department of Health and Human Services, 1999). Examining the influence of belief systems on stigmatizing attitudes allows us to understand the nature and context of stigma, and potentially direct appropriate ways to target and implement anti-stigma interventions. In sum, the current study contributes to the stigma literature by examining the

relationship between fundamentalist religious beliefs and stigma of a severe mental illness and a SUD. The hypothesis that evangelical participants would endorse higher stigmatization of SUD and severe mental illness was only partially supported, as evangelical participants reported significantly higher stigmatization of severe mental illness (schizophrenia) and the control condition (asthma), though they did not significantly differ from non-evangelical participants in stigmatization of AUD. This finding might be contextualized by considering religious factors related to the symptomatology and treatment of both AUD and schizophrenia. These factors include a tendency among the general population to more highly stigmatize SUD, perceived sacrilege of religious delusions in schizophrenia, similarities between tenants of the 12-step program and evangelical beliefs, probability of social distance, and conservative-backed public policy that might serve to destigmatize AUD (Carrico, Gifford, & Moos, 2007; Connors et al., 2001; Corrigan et al., 2012; Room, 2005; Siddle et al., 2002). Additionally, efforts to minimize the religiosity gap and increase connection between providers and evangelical groups might serve to counteract stigma while increasing access to healthcare for at-risk populations (Campbell et al., 2006). Further research in this area will allow for more understanding of stigma within religious groups and suggest future directions for implementing targeted anti-stigma campaigns and improving public policy, social supports, and psychological assessment and treatment methods for individuals with severe mental illness.

References

- Abbey, S., Charbonneau, M., Tranulis, C., Moss, P., Baici, W., Dabby, L., Gautam, M., & Pare, M. (2012). Stigma and discrimination. *Canadian Journal of Psychiatry*, 56, 1-9.
- Adrian, M. (2010). If we spend \$10 billion on faith-based interventions, will they work? A comment on the relationship between addiction and religion and its possible implications for care. *Substance Use and Misuse*, 45, 2390-2393.
- Ahern, J., Stuber, J., & Galea, S. (2007). Stigma, discrimination, and the health of illicit drug users. *Drug and Alcohol Dependence*, 11, 188-196.
doi:10.1016/j.drugalcdep.2006.10.014
- Alcoholics Anonymous. (2014). *Alcoholics Anonymous: Big book reference edition for addiction treatment*.
- Altemeyer, B. (1981). *Right-wing authoritarianism*. Manitoba: University of Manitoba Press.
- Altemeyer, B. (2003). What happens when authoritarians inherit the earth? A simulation. *Analyses of Social Issues and Public Policy*, 3, 161-169. doi:10.1111/j.1530-2415.2003.00020.x
- Altemeyer, B., & Hunsberger, B. (1992). Authoritarianism, religious fundamentalism, quest, and prejudice. *International Journal for the Psychology of Religion*, 2, 113-133.
- Altemeyer, B., & Hunsberger, B. (2004). A revised religious fundamentalism scale: The short and sweet of it. *The International Journal for the Psychology of Religion*, 14, 47-54. doi:10.1207/s15327582ijpr1401_4
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing.

- Angermeyer, M. C., & Matschinger, H. (1997). Social distance toward the mentally ill: Results from representative surveys in the Federal Republic of Germany. *Psychological Medicine*, 27, 131-141.
- Aust, F., Diedenhofen, B., Ullrich, S., & Musch, J. (2013). Seriousness checks are useful to improve data validity in online research. *Behavior Research Methods*, 45, 527-535. doi: 10.3758/s13428-012-0265-2
- Boekel, L. C., Brouwers, E. P. M., Weeghel, J., & Garretsen, H. F. L. (2013). Stigma among health professionals toward patients with substance use disorders and its consequences for healthcare delivery: Systematic review. *Drug and Alcohol Dependence*, 131, 23-35. doi:10.1016/j.drugalcdep.2013.02.018
- Brandt, M. J., & Reyna, C. (2010). The role of prejudice and the need for closure in religious fundamentalism. *Personality and Social Psychology Bulletin*, 36, 715-725. doi:10.1177/0146167210366306
- Brockington, I. F., Hall, P., & Levings, J. (1993). The community's tolerance of the mentally ill. *British Journal of Psychiatry*, 162, 93– 99.
- Campbell, M. K., Hudson, M. A., Resnicow, K., Blakeney, N., Paxton, A., & Baskin, M. (2006). Church-based health promotion interventions: Evidence and lessons learned. *Annual Review of Public Health*, 28, 213-234. doi:10.1146/annurev.publhealth.28.021406.144016
- Carrico, A. W., Gifford, E. V., & Moos, R. H. (2007). Spirituality/religiosity promotes acceptance-based responding and 12-step involvement. *Drug and Alcohol Dependence*, 89, 66-73. doi:10.1016/j.drugalcdep.2006.12.004

- Connors, G. J., Tonigan, J. S., & Miller, W. R. (2001). A longitudinal model of AA affiliation, participation, and outcome: Retrospective study of the Project MATCH outpatient and aftercare samples. *Journal of Studies on Alcohol and Drugs*, 62, 817-825.
- Corrigan, P. W., Edwards, A. B., Green, A., Diwan, S. L., & Penn, D. L. (2001). Prejudice, social distance, and familiarity with mental illness. *Schizophrenia Bulletin*, 27, 219-225. doi:10.1093/oxfordjournals.schbul.a007096
- Corrigan, P. W., Kerr, A., & Knudsen, L. (2005). The stigma of mental illness: Explanatory models and methods for change. *Applied and Preventative Psychology*, 11, 179-190. doi:10.1016/j.appsy.2005.07.001
- Corrigan, P. W., Kuwabara, S. A., & O'Shaughnessy, J. (2009). The public stigma of mental illness and drug addiction: Findings from a stratified random sample. *Journal of Social Work*, 9(2), 139-147. doi:10.1177/1468017308101818
- Corrigan, P. W., Markowitz, F. E., & Watson, A. C. (2004). Structural levels of mental illness stigma and discrimination. *Schizophrenia Bulletin*, 30, 481-491.
- Corrigan, P. W., Morris, S. B., Michaels, P. J., Rafacz, J. D., & Rusch, N. (2012). Challenging the public stigma of mental illness: A meta-analysis of outcome studies. *Psychiatric Services*, 63, 963-973. doi:10.1176/appi.ps.201100529
- Coutre, S. M., & Penn, D. L. (2003). Interpersonal contact and the stigma of mental illness: A review of the literature. *Journal of Mental Health*, 12, 291-305. doi:10.1080/09638231000118276

- Crisp, A. H., Gelder, M. G., Rix, S., Meltzer, H. I., & Rowlands, O. J. (2000). Stigmatization of people with mental illnesses. *The British Journal of Psychiatry*, 177, 4-7.
doi:10.1192/bjp.177.1.4
- Crosby, J. W., & Bossley, N. (2012). The religiosity gap: Preferences for seeking help from religious advisors. *Mental Health, Religion, & Culture*, 15, 141-159.
doi:10.1080/13674676.2011.561485
- Darnell, A., & Sherkat, D. E. (1997). The impact of Protestant fundamentalism on educational attainment. *American Sociological Review*, 62, 306-315.
- Dennis, S. A., Goodson, B. M., & Pearson, C. (2018). Online worker fraud and evolving threats to the integrity of MTurk data: A discussion of virtual private servers and the limitations of IP-based screening procedures. *Social Science Research Network*, 3.
doi:10.2139/ssrn.3233954
- Donovan, D. M., Ingalsbe, M. H., Benbow, J., & Daley, D. C. (2013). 12-step interventions and mutual support programs for substance use disorders: An overview. *Social Work and Public Health*, 28, 313-332. doi:10.1080/19371918.2013.774663
- Feeg, V. D., Prager, L. S., Moylan, L. B., Smith, K. M., & Cullinan, M. (2014). Predictors of mental illness stigma and attitudes among college students: Using vignettes from a campus common reading program. *Issues in Mental Health Nursing*, 35, 694-703.
doi:10.3109/01612840.2014.892551
- Gearing, R. E., Alonzo, D., Smolak, A., McHugh, K., Harmon, S., & Baldwin, S. (2010). Association of religion with delusions and hallucinations in the context of schizophrenia: Implications for engagement and adherence. *Schizophrenia Research*, 126, 150-163. doi:10.1016/j.schres.2010.11.005

- Hackett, C., & Lindsay, D. M. (2008). Measuring evangelicalism: Consequences of different operationalization strategies. *Journal for the Scientific Study of Religion* 47, 499–514. doi:10.1111/j.1468-5906.2008.00423.x
- Hall, D. L., Matz, D. C., & Wood, W. (2010). Why don't we practice what we preach? A meta-analytic review of religious racism. *Personality and Social Psychology Review*, 14, 126-139. doi:10.1177/1088868309352179
- Hill, E. D., Cohen, A. B., Terrell, H. K., & Nagoshi, C. T. (2010). The role of social cognition in the religious fundamentalism-prejudice relationship. *Journal for the Scientific Study of Religion*, 49, 724-739. doi:10.1111/j.1468-5906.2010.01542.x
- Hood, R. W., Hill, P. C., & Williams, W. P. (2005). *The psychology of religious fundamentalism*. New York, NY: Guilford.
- Iyassu, R., Jolley, S., Bebbington, P., Dunn, G., Emsley, R., Freeman, D., ... Garety, P. (2013). Psychological characteristics of religious delusions. *Social Psychiatry and Psychiatric Epidemiology*, 49, 1051-1061. doi:10.1007/s00127-013-0811-y
- Jackson, L. M., & Esses, V. M. (1997). Of scripture and ascription: The relation between religious fundamentalism and intergroup helping. *Personality and Social Psychology Bulletin*, 23, 893-906. doi:10.1177/0146167297238009
- Jackson, L. M., & Hunsberger, B. (1999). An intergroup perspective on religion and prejudice. *Journal for the Scientific Study of Religion*, 38, 509-523. doi:10.2307/1387609
- Jahnke, S. (2018). Emotions and cognitions associated with the stigma of non-offending pedophilia: A vignette experiment. *Archives of Sexual Behavior*, 47, 363-373. doi:10.1007/s10508-017-1073-7

- Kaskutas, L. A., Ye, Y., Greenfield, T. K., Witbrodt, J., & Bond, J. (2008). Epidemiology of alcoholics anonymous participation. *Recent Developments in Alcoholism*, 18, 261-282. doi:10.1007/978-0-387-77725-2-15
- Koleva, S. P., Graham, J., Iyer, R., Ditto, P. H., & Haidt, J. (2012). Tracing the threads: How five moral concerns (especially purity) help explain culture war attitudes. *Journal of Research in Personality*, 46, 184-194. doi:10.1016/j.jrp.2012.01.006
- Kulesza, M., Larimer, M. E., & Rao, D. (2013). Substance use related stigma: What we know and the way forward. *Journal of Addictive Behaviors, Therapy, and Rehabilitation*, 2, 782. doi:10.4172/2324-9005.1000106
- Lawrence, B. B. (1989). *Defenders of God: The fundamentalist revolt against the modern age*. San Francisco: Harper & Row.
- Lawrie, S. M. (1999). Stigmatization of psychiatric disorder. *Psychiatric Bulletin*, 23, 129-131. doi:10.1192/pb.23.3.129
- Lazar, A., & Hammer, J. H. (2018). Religiousness and anti-gay attitudes: The mediating function of intratextual religious fundamentalism. *Psychology of Violence*, 8, 763-771. doi:10.1037/vio0000197
- Malka, A., Lelkes, Y., Srivastava, S., Cohen, A. B., & Miller, D. T. (2012). The association of religiosity and political conservatism: The role of political engagement. *Political Psychology*, 33, 275-299.
- Mavor, K. I., Louis, W. R., Laythe, B. (2011). Religion, prejudice, and authoritarianism: Is RWA a boon or bane to the psychology of religion? *Journal for the Scientific Study of Religion*, 50, 22-43. doi:10.1111/j.1468-5906.2010.01550.x

- Mayers, C., Leavey, G., Valliantou, C., & Barker, C. (2007). How clients with religious or spiritual beliefs experience psychological help-seeking and therapy: A qualitative study. *Clinical Psychology & Psychotherapy, 14*, 317-327. doi:10.1002/cpp.542
- McLatchie, L. R., & Draguns, J. G. (1984). Mental health concepts of evangelical Protestants. *Journal of Psychology, 118*, 147-159.
doi:10.1080/00223980.1984.10542857
- McLaughlin, D., & Long, A. (1996). An extended literature review of health professionals' perceptions of illicit drugs and their clients who use them. *Journal of Psychiatric and Mental Health Nursing, 3*, 283-288.
- Mohr, S., Perroud, N., Gillieron, C., Brandt, P., Rieben, I., Borrás, L., & Huguelet, P. (2010). Delusions with religious content in patients with psychosis: How they interact with spiritual coping. *Psychiatry, 73*, 158-172. doi:10.1521/psyc.2010.73.2.158
- Mullen, P. E. (1992). Criminality, dangerousness, and schizophrenia. In D. J. Kavanagh (Ed), *Schizophrenia*. London: Chapman and Hall.
- National Institute on Alcohol Abuse and Alcoholism [NIAAA] (2018). *Alcohol Facts and Statistics*. Retrieved September 28, 2019, from <https://www.niaaa.nih.gov/alcohol-facts-and-statistics>
- National Institute on Alcohol Abuse and Alcoholism (2019). *Alcohol Use Disorder*. Retrieved September 28, 2019, from <https://www.niaaa.nih.gov/alcohol-health/overview-alcohol-consumption/alcohol-use-disorders>
- Pescosolido, B. A. (2013). The public stigma of mental illness: What do we think, what do we know, what can we prove? *Journal of Health and Social Behavior, 54*, 1-21.
doi:10.1177/0022146512471197

Pescosolido, B. A., Fettes, D. L., Martin, J. K., Monahan, J., & McLeod, J. D. (2007).

Perceived dangerousness of children with mental health problems and support for coerced treatment. *Psychiatric Services*, 58, 619-625.

Pew Research Center. (2015, May 12). *America's Changing Religious Landscape*. Retrieved from <http://www.pewforum.org/2015/05/12/americas-changing-religious-landscape/>

Radcliffe, P., & Stevens, A. (2008). Are drug treatment services only for 'thieving junkie scumbags'? Drug users and the management of stigmatized identities. *Social Science & Medicine*, 67, 1065-1073. doi:10.1016/j.socscimed.2008.06.004

Reavley, N. J., & Jorm, A. F. (2011). *National Survey of Mental Health Literacy and Stigma*. Commonwealth of Australia: University of Melbourne.

Room, R. (2005). Stigma, social inequality, and alcohol and drug use. *Drug and Alcohol Review*, 24, 143-155. doi:10.1080/09595230500102434

Siddle, R., Haddock, G., Tarrier, N., & Faragher, E. B. (2002). Religious delusions in patients admitted to hospital with schizophrenia. *Social Psychiatry and Psychiatric Epidemiology*, 37, 130-138.

Sowislo, J. F., Lange, C., Euler, S., Hachtel, H., Walter, M., Borgwardt, S., Lang, U. E., & Huber, C. G. (2017). Stigmatization of psychiatric symptoms and psychiatric service use: A vignette-based representative population survey. *European Archives of Psychiatry and Clinical Neuroscience*, 267, 351-357. doi:10.1007/s00406-016-0729-y

State of Wisconsin. (2005). State Alcohol, Drug Abuse, Developmental Disabilities, and Mental Health Act. 51.03e.

U.S. Department of Health and Human Services. (1999). Mental health: A report of the surgeon general. Rockville, MD: U.S. Department of Health and Human Services,

- Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institute of Health, National Institute of Mental Health
- Vogel, D. L., & Wester, S. R. (2003). To seek help or not to seek help: The risks of self-disclosure. *Journal of Counseling Psychology*, 50, 351-361. doi:10.1037/0022-0167.50.3.351
- Wahl, O. F. (1999). Mental health consumers' experience of stigma. *Schizophrenia Bulletin*, 25, 467-478. doi:10.1093/oxfordjournals.schbul.a033394
- Warner, J. (2009). Temperance, alcohol, and the American evangelical: A reassessment. *Addiction*, 104. doi:10.1111/j.1360-0443.2009.02616.x
- Wesselmann, E. D., & Granziano, W. G. (2010). Sinful and/or possessed? Religious beliefs and mental illness stigma. *Journal of Social and Clinical Psychology*, 29, 402-437. doi:10.1521/jscp.2010.29.4.402
- Yang, L., Wong, L. Y., Grivel, M. M., & Hasin, D. S. (2017). Stigma and substance use disorder: An international phenomenon. *Current Opinion in Psychiatry*, 30, 378-388. doi:10.1097/YCO.0000000000000351
- Yuan, Q., Seow, E., Abdin, E., Chua, B. Y., Ong, H. L., Samari, E., ... Subramaniam, M. (2018). Direct and moderating effects of personality on stigma toward mental illness. *BMC Psychiatry*, 18. doi:10.1186/212888-018-1932-

Table 1

Descriptive Statistics

		Mean	SD
Evangelicals	Schizophrenia	3.83	0.74
	Alcohol Use Disorder	3.53	0.89
	Asthma	3.16	1.36
Non-Evangelicals	Schizophrenia	3.34	0.88
	Alcohol Use Disorder	3.43	0.66
	Asthma	2.28	0.86

Table 2

ANOVA results

Predictor	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>p</i>	partial η^2
(Intercept)	3492.78	1	3492.78	24.48	.000	.93
Vignette	46.22	2	23.11	29.87	.000	.14
Condition						
Evangelicalism	19.63	1	19.63	25.37	.000	.07
Vignette	8.36	2	4.18	5.40	.005	.03
Condition x Evangelicalism						
Error	276.22	357	.774			

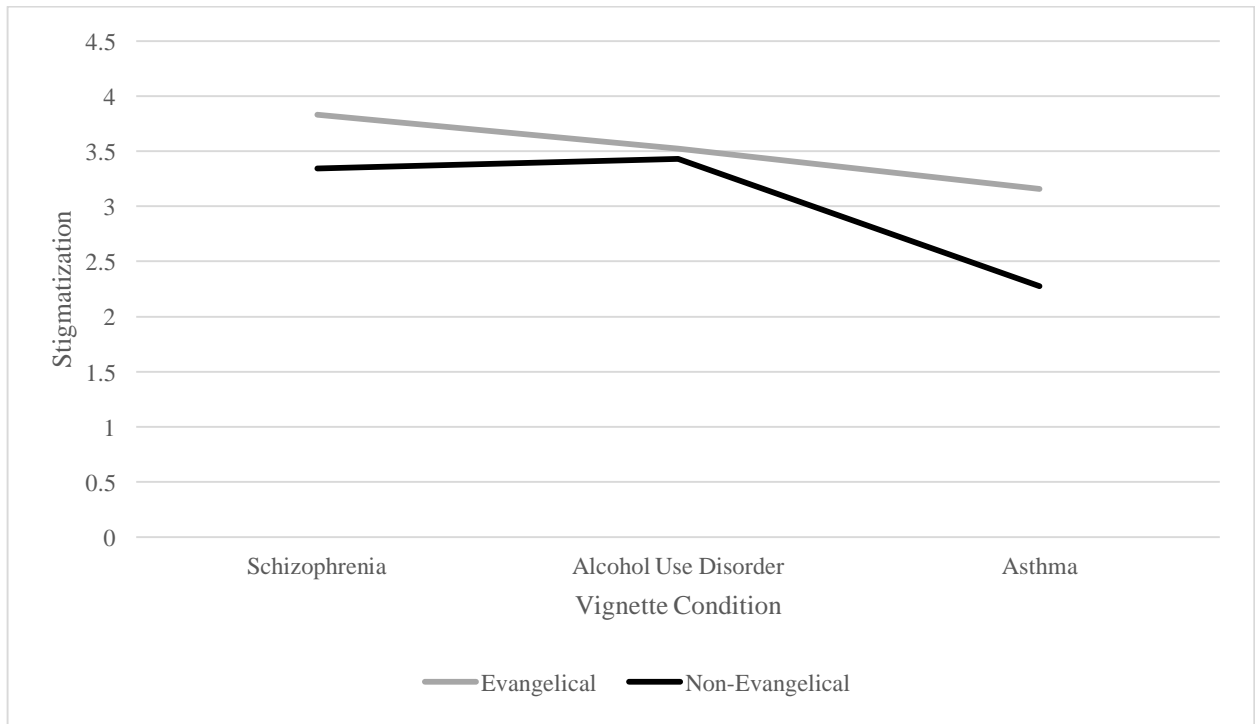


Figure 1. Interaction between evangelicalism and vignette condition on stigmatization.

Appendix A

Stigmatizing Attitudes Toward Severe Mental Illness Scale

1. If I had this problem, I wouldn't tell anyone.
2. People with the problem are unpredictable.
3. I would avoid people with this problem.
4. People with this problem are dangerous.
5. This problem is not a real medical illness.
6. This problem is a sign of personal weakness.
7. *[Please select strongly disagree.]*
8. The person could "snap out of" this problem if they really wanted to.
9. People with a problem like this should be kept away from other members of society.
10. People with a problem like this cannot make decisions for themselves.
11. People with a problem like this must be supervised by others.

Validity items are denoted in italics.

Appendix B

Religious Fundamentalism (RF) Scale

1. God has given humanity a complete, unfailing guide to happiness and salvation, which must be totally followed.
2. No single book of religious teachings contains all the intrinsic, fundamental truths about life. *
3. The basic cause of evil in this world is Satan, who is still constantly and ferociously fighting against God.
4. It is more important to be a good person than to believe in God and the right religion.
*
5. There is a particular set of religious teachings in this world that are so true, you can't go any "deeper" because they are the basic, bedrock message that God has given humanity. *
6. When you get right down to it, there are basically only two types of people in the world: the Righteous, who will be rewarded by God; and the rest, who will not.
7. Scriptures may contain general truths, but they should NOT be considered completely, literally true from beginning to end. *
8. To lead the best, most meaningful life, one must belong to the one, fundamentally true religion.
9. "Satan" is just a name people give to their own bad impulses. There really is *no such thing* as a diabolical "Prince of Darkness" who tempts us. *
10. Whenever science and sacred scripture conflict, *science* is probably right. *

11. The fundamentals of God's religion should never be tampered with, or compromised with others' beliefs.

12. *All* of the religions in the world have flaws and wrong teachings. There is *no* perfectly true, right religion.

* Indicates reverse-scored item

Appendix C

Demographic Questionnaire

Age: ____

Zip Code: _____

Gender: Man

Woman

Non-binary

Other

Race/Ethnicity: African-American/Black

Hispanic/Latino

Caucasian/White

Asian/Asian-American

Pacific Islander

Native American

Marital Status: Married

Widowed

Divorced or Separated

Never Married or Single

Children: Yes (Add number)

No

Highest level of education completed:

No schooling completed

Pre-school to 8th grade

Some high school, no diploma

High school graduate, diploma, or the equivalent (for example: GED)

Some college credit, no degree

Trade/technical/vocational training

Associate degree

Bachelor's degree

Master's degree

Professional degree

Doctorate degree

Religion: Christian

Muslim

Jewish

Buddhist

Hindi

Other religion (please specify): _____
 Agnostic (the existence of God is unknown or unknowable)
 Atheist (disbelief in the existence of God)

Denomination (i.e., Baptist, Methodist, Presbyterian, etc.):

Do you identify as evangelical?
 Yes No

Please select "White Elephant.": *Blue Cow*
Red Kitten
White Elephant
Orange Rhino

What type of area do you consider yourself to have been primarily raised in?
 Urban Suburban Rural

Are you now, or have you ever been, diagnosed with a mental illness?
 Yes No

Are you currently seeking, or have you sought, treatment for a mental illness?
 Yes No

Do you have any friends or family who are now, or ever have been, diagnosed with a mental illness?
 Yes No

If yes, how often do you interact with this person?
 Daily A few times a week Weekly A few times a month
 Monthly A few times a year Yearly Less than yearly

If yes, how would you characterize the nature of your contact with this person?
 Very positive Slightly positive Neutral Slightly negative Very negative

Think of the vignette you read. What do you think the person's gender was?
 Man Woman Other

What do you think the person's age was? _____

Validity items are denoted in italics.

Appendix D

Schizophrenia Vignette

A person lives in an apartment in your neighborhood. From friends you have heard that the person's family has been having more and more trouble with this person. This person is said to have been having problems at their workplace for quite some time and to have recently lost their job because of these problems. They wear the same clothes in all weather and have let their hair grow long and untidy. They are always on their own and are often seen sitting in the park talking to themselves. This person speaks carefully using uncommon and sometimes made-up words. They are polite but avoid talking to other people. This person says that spies are observing them because they have secret information about international computer systems which control people through television transmitters. This person's landlord complains that this person will not let him clean the room, which is increasingly dirty and filled with glass objects. The person says they are using these objects to "receive messages from space." The family knows the person is not taking drugs.

Appendix E

Alcohol Use Disorder Vignette

A person lives in an apartment in your neighborhood. From friends you have heard that the person's family has been having more and more trouble with this person. This person is said to have been having problems at their workplace for quite some time and to have recently lost their job because of these problems. Lately, this person is said to have been drinking alcohol in larger quantities and also during the day. Friends report that this person does not seem as well groomed as they usually are. Sometimes they have looked ill; they have seemed to sweat strongly and to tremble. This person is said to have told their family members that they have been ashamed sometimes when they did embarrassing things under the influence of alcohol. They have already tried to drink less, but these attempts have failed after a few days.

Appendix F

Asthma Vignette

A person lives in an apartment in your neighborhood. From friends you have heard that the person's family has been having more and more trouble with this person. This person is said to have been having problems at their workplace for quite some time and to have recently lost their job because of these problems. This person has had a history of breathing problems. They often have bouts of coughing at night, and don't sleep very well. Their family has noticed that these problems seem to be particularly bad during challenging situations, in the Spring and Fall, and during strenuous sports activities. They used to enjoy playing soccer but recently gave it up because of these problems. They feel badly about their breathing problems, which seem to be getting worse, and they wish they could "be just like other people." They are involved in several hobbies, including sports and music, and share these activities with several friends.

Appendix G

To: Emily Rowe

Psychology

CAMPUS EMAIL

From: Robin Tyndall, IRB Administrator

Date: 11/07/2018

RE: Notice of IRB Exemption

Agrants #:

Grant Title:

STUDY #: 19-0016

STUDY TITLE: Stigma of Mental Illness and Substance Use Disorders and Religious
Fundamentalism

Exemption Category: (2) Anonymous Educational Tests; Surveys, Interviews or
Observations

This study involves minimal risk and meets the exemption category cited above. In
accordance with 45 CFR 46.101(b) and University policy and procedures, the research
activities described in the study materials are exempt from further IRB review.

Vita

Emily A. Rowe was born in Rocky Mount, NC, to Steve and Lisa Rowe. She attended University of North Carolina Wilmington from August 2012 to May 2016 and earned her Bachelor of Arts degree in psychology and a minor in women and gender studies. In August 2017, she continued her studies at Appalachian State University to pursue a Master of Arts in clinical psychology and was awarded the degree in December 2019.